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## REPORT

### How Robinhood Makes Money

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Robinhood has made investing accessible for even the most inexperienced first-time investors. But while it has attracted millions of users with its no-fee, gamified approach, critics argue that the company's business model is not without risk.

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model that is as lucrative as it is potentially precarious.

In this report, we explore Robinhood's revenue and cost centers, competitive landscape, and areas of opportunity ahead of a rumored IPO – as well as what the future might hold for the app that has almost singlehandedly transformed how online brokerages operate.

### Table of contents

- **How Robinhood Works**
  - Pre-Robinhood: Rise of the free trading investment platform
  - How trading on Robinhood works
  - The competitive landscape
- **Robinhood's Revenue And Cost Centers**
  - Payment for order flow
  - Robinhood Gold and margin lending
  - Tertiary fintech products
  - CAC vs. LTV
  - Regulatory and legal challenges
- **Conclusion**

## How Robinhood Works

Robinhood's primary means of driving revenue is making very small amounts of money on individual trades at scale.

It does this by attracting large numbers of users using incentives such as "free" stocks and commission-free trading, retaining those users and encouraging trading activity via behavioral triggers in the app, and earning razor-thin margins on those trades through a process known as payment for order flow (PFOF).

Prior to Robinhood's launch, getting started with investing could be difficult and time-consuming. With much of its revenue dependent on attracting large numbers of users, Robinhood had to lower the traditional barriers to entry in investing – and did so by challenging the status quo of the entire brokerage industry.

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instruments, including bonds, exchange-traded funds (ETFs), mutual funds, and stocks.

Brokerages typically fall into one of two categories: discount and full service.

Discount brokerages are able to charge their customers less for services provided by reducing overheads such as physical locations. They usually charge lower commissions than full-service brokerages, but they don't conduct market analysis on behalf of their clients or offer investment advice. Because of this, discount brokerages are often synonymous with online brokerages.

Full-service brokerages typically charge higher commission fees, but offer a wider range of services including market research and investment advice. Many full-service brokerages have nationwide chains of brick-and-mortar locations, allowing customers to discuss their investment goals with an adviser in person.

Until fairly recently, investing was out of reach for many people. Choosing a brokerage required at least some knowledge of the markets, and commission fees made investing a potentially costly endeavor.

That changed in the wake of the financial crisis of 2008, when the first digital brokerages began to emerge, offering clients a new, lower-cost way to invest. These platforms quickly became a popular alternative to full-service brokerages.

Emerging in 2013, Robinhood has lowered the barriers that were once common to investing. The product's commission-free value proposition makes it easier for lower-income first-time investors to begin trading, and there are no minimum account requirements. Users can also trade fractional shares — fractions of a single share in a company, as opposed to a whole share. This makes investing in high-performance stocks, such as Apple, more accessible.

Further, Robinhood's app interface is designed to avoid overwhelming beginner investors with information.

This accessibility expands the platform's total addressable market (TAM) considerably by moving beyond typically older, wealthier individuals — who have at least some knowledge of investing — to younger and less experienced ones. The average Robinhood customer, for example, is 31 years old, while the average Charles Schwab customer is around 50.

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## How trading on Robinhood works

Before a user can begin trading on Robinhood, they must apply for an account. The Securities and Exchange Commission (SEC) requires all brokerages operating in the US to collect and verify the personal information of individuals trading on their platforms, including net worth and Social Security number.

The process can take up to a week, though most applications tend to be processed faster. Users must also connect a bank account so that funds can be transferred to and from their Robinhood brokerage accounts.

The Robinhood app differs from most online brokerage tools in 2 key ways:

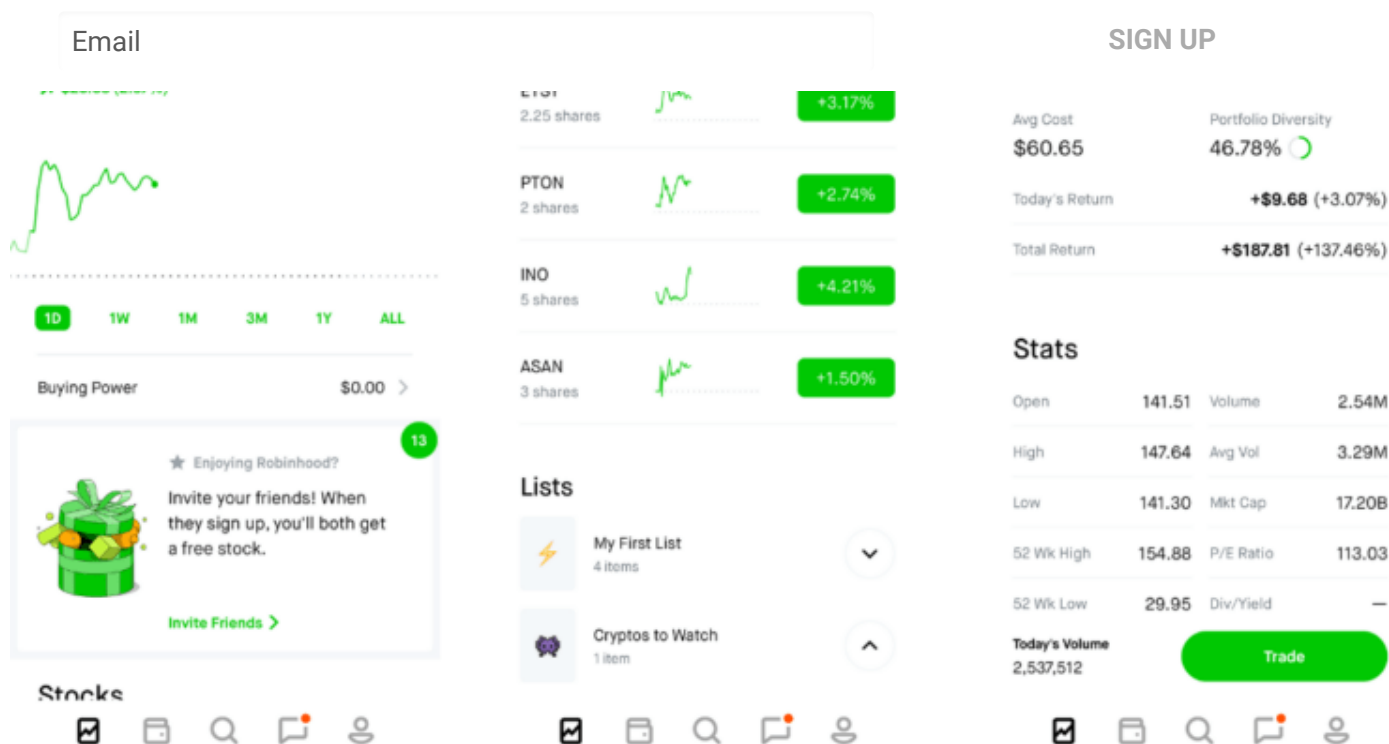
- It provides the user with only the most relevant information in an effort to reduce complexity.
- It encourages frequent use with behavioral triggers that reward certain actions.

Rather than risk overwhelming users by presenting them with the range of data offered by some professional trading tools, Robinhood keeps its information as streamlined as possible. For example, individual stock performance over time is displayed as a simple line graph. Users can find information on specific stocks with a typical search field.

Account holders' positions are summarized in green (positive) or red (negative), offering quick overviews of their entire portfolio. Shares can be bought and sold with just 2 clicks on a stock's ticker page. Trades are shown as simple transactions in a user's account history in much the same way as deposits and withdrawals are displayed by banking apps.

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Source: Robinhood

But simplicity is only half of the equation. The other half is Robinhood's use of behavioral triggers and rewards.

The gamified elements begin as soon as customers start interacting with the app. One of Robinhood's promises is that new accounts receive a free stock — a single share of a company determined at random. While new users could receive a share in a company like Apple or Tesla, Robinhood acknowledges that it's unlikely. New users have a 98% chance of receiving a stock valued at between \$2.50 and \$10 — but the incentive is still there.

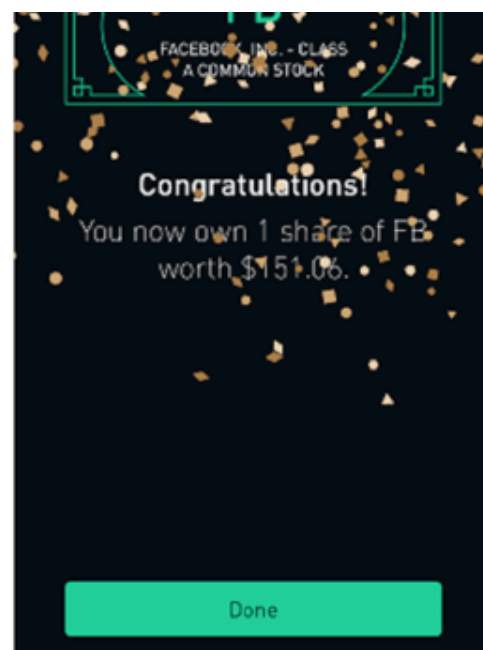
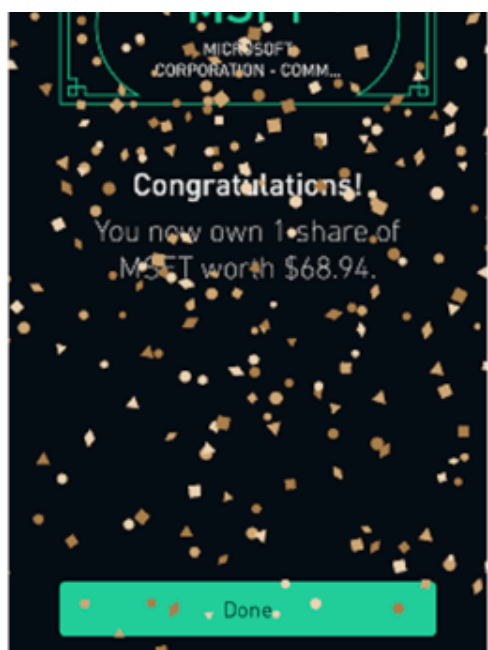
Much of Robinhood's user experience is rooted in positive reinforcement and short-term reward structures. When account holders make their first deposit, they receive a congratulatory message saying that funds have been made available immediately so they can start trading. Free stocks serve as a referral engine to drive other people to the product. Robinhood also sends push notifications to alert users of movements in their positions, bringing them back to the app.

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*Source: Robinhood via Wallet Hacks*

One of the criticisms often leveled at Robinhood is how its gamified approach to investing obscures the risks of playing the market with mechanisms designed to be inherently addictive. These elements are sometimes known as “dark patterns.”

These design choices, coupled with the lockdowns necessitated by the Covid-19 pandemic, are believed to be responsible for the approximately 3M new users that Robinhood gained in the first 4 months of 2020. These so-called “pandemic day traders” traded 9x as many shares as E-Trade users and 40x as many shares as Schwab users during Q1’20. They also traded 88x as many risky options contracts as Schwab users during that period.

Criticisms of Robinhood’s practice of targeting inexperienced investors intensified in June 2020, following the suicide of a student at the University of Nebraska, who had seen a seemingly negative balance indicator of \$730K in the Robinhood app.

Despite the prevalence of media narratives about inexperienced investors making risky trades during prolonged lockdowns, recent research published by the National Bureau of Economic Research (NBER) suggests this may not reflect actual investment activity on Robinhood. While some users invested in more exotic instruments during the initial months of the pandemic, Robinhood investors “principally held stocks with large persistent past share-volumes and dollar-volumes, making them invest overwhelmingly in large rather than in obscure stocks.”

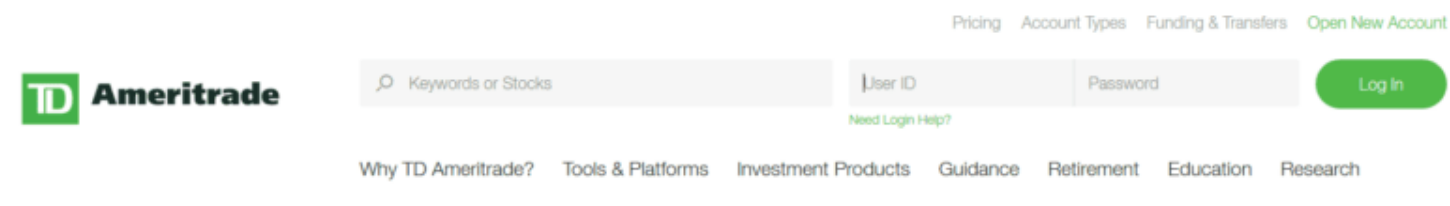
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When Robinhood launched in 2013, no other major brokerage offered zero-commission trading. The company remained an outlier in this regard until October 2019, when Charles Schwab, E-Trade, and TD Ameritrade all announced they would no longer levy commissions on ETF, options, and stock trading.



The banner features a dark green background with white text. On the left, it reads: 'Our award-winning investing experience, now commission-free'. Below this, smaller text states: 'Announcing \$0 commissions on online stock, ETF, and option trades\*\*. Get our best-in-class platforms, award-winning service & education and extensive branch network, now with commission-free trading.' There are two buttons: a green 'Open new account' button and a white 'Learn more' button. On the right side, the text '\$0.00' is displayed in a large font with a green underline, and 'commissions' is written below it in a smaller font. At the bottom left, a small disclaimer reads: '\*\*Applies to U.S. exchange-listed stocks, ETFs, and options. A \$0.65 per contract fee applies for options trades, with no exercise or assignment fees.'

Source: TD Ameritrade

At the time, many analysts believed that dropping commission fees was a major misstep. Robinhood posed little meaningful threat to the business of major retail brokerage firms, and mimicking a startup's already precarious business model would ultimately harm revenues.

But those fears turned out to be unfounded. Zero-fee trading is now considered the norm, and even well-established brokerages have been forced to adopt increasingly defensive positions as Robinhood has grown.

While established retail brokerages have long been Robinhood's primary competitors, they are far from the only ones. **Many other digital brokerages and adjacent services have emerged in recent years**, with the majority acting in the business-to-consumer (B2C) space.

However, relatively few of these newer digital brokerages are competing with Robinhood directly. Instead, they favor comparatively niche markets or provide investment products alongside more mainstream financial services.

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traditional banking services, including savings accounts. This diversity of choice may benefit financial consumers, but it also means greater competition for the same users and an increasingly fractured market for investment products and services.

Since “free” is no longer a meaningful competitive differentiator, Robinhood has been forced to attract more new users than legacy brokerages to capitalize on its high-volume, low-margin model.

Fortunately for Robinhood, it appears that these legacy brokerages are less motivated to pursue the lower-value first-time investors that compose much of its user base. The company has seen explosive user growth over the last several years, rising from 1M account holders in 2016 to over 13M in 2020.

While other fintech startups have seen strong user growth in recent years, they still trail Robinhood. Acorns, for example, doubled its user base from 3.5M users in 2018 to 7M in 2020. Stash has fewer than half as many users as Robinhood.

Like Robinhood, SoFi has experienced dramatic growth in 2020. From January to July, the total number of users on the platform nearly tripled to 9M, while daily trading volume was up by more than 300%.

Robinhood could look to further reduce the barriers to entry in investing by offering an automated investment product alongside more mainstream banking services. Platforms such as Acorns and **Wealthfront** have experienced strong growth thanks in part to their automated investment features. Robinhood is in an advantageous position to do the same if it can offer a compelling alternative to conventional banking products and present investing as a passive, low-risk activity suitable for casual first-time investors.

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# Robinhood's Revenue And Cost Centers

Robinhood has diversified its product offerings to appeal to a broader range of financial consumers, and the company has made several decisive moves that signal its intention to pursue greater market share of the fintech space. However, its primary revenue centers remain the tiny margins the company makes on high-frequency, high-volume trading and its premium membership service.

## Payment for order flow

Robinhood's initial sign-up page described the service as "The world's \$0 commission stock brokerage." It encouraged visitors to "Stop paying \$10 for every trade," a value proposition people found so compelling that the product had nearly 1M sign-ups before going live.

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The world's \$0 commission stock brokerage.  
Stop paying \$10 for every trade.

Enter email address

Get Early Access



Source: Robinhood via Web Archive

Although Robinhood was among the first zero-commission online brokerages, payment for order flow (PFOF) – the mechanism by which the company could offer fee-free trades, and its primary revenue center – was far from new.

PFOF is a controversial practice in which brokerages direct third parties known as “market makers” to execute trades on their behalf. For Robinhood, the process would look like this:

1. First, an investor places an order to buy or sell stock via the Robinhood app.
2. Next, Robinhood passes that order on to a market maker such as Citadel Securities or Two Sigma Securities, which actually executes the trade. The market maker pays Robinhood – typically,

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It also benefits market makers by giving them access to vast volumes of trades.

Market makers “generally have more information and processing power than retail traders and brokers,” according to the SEC. Theoretically, this makes them the ideal middlemen for high-volume transactions. But PFOF, which was pioneered by disgraced former investment banker Bernie Madoff, is controversial due to its lack of transparency.

Per SEC Rule 605, market makers are legally bound to provide the best possible quality of execution for each trade. “Quality of execution” refers to how close the fill price – the actual cost of a security, as opposed to its theoretical price – is to the bid or asking price of that security. But while market makers are legally compelled to seek the best possible execution of trades for their clients, they are not compelled to provide the best possible *price*. This can result in market makers executing trades at prices that are profitable for them, but may not be in the best interests of the trader.

Robinhood is not the only brokerage to capitalize on PFOF. Other brokerages such as Charles Schwab and E-Trade make money from PFOF, albeit significantly less than Robinhood – PFOF accounts for just 3% of Schwab’s revenues and 17% of E-Trade’s revenues. Prior to its acquisition by Schwab in 2019, TD Ameritrade reported that its payments for order flow were roughly a tenth of a penny per share, and E-Trade reported similar figures. But Robinhood has made up to 10x more from PFOF than other brokerages, according to some analysts.

“Assume the average stock traded has a share price of \$50. It takes 20,000 shares traded at \$50 for \$1,000,000 in volume, for which E-Trade makes \$22 per \$1,000,000 traded, which sounds like a small number until you realize they cleared \$47,000,000 last quarter from this. But off an identical \$1,000,000 in volume, Robinhood gets paid \$260 from the same [high-frequency trading] firms. If Robinhood did as much trade volume as E-Trade, they would theoretically be making close to \$500 million per quarter in payments from [high-frequency trading] firms.” – Logan Kane, founder of North of Sunset Capital Management

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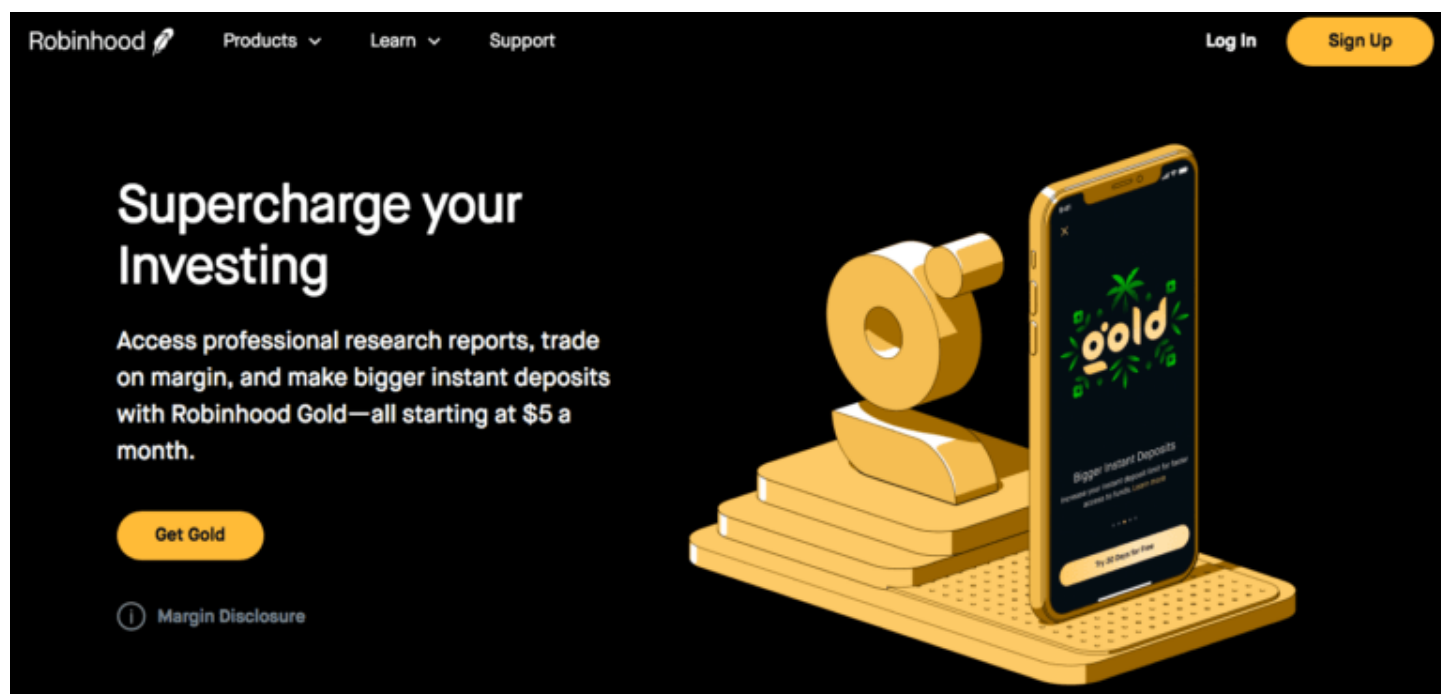
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### Robinhood Gold and margin lending

Robinhood Gold is the company's second primary revenue center after PFOF. The subscription-based service offers Robinhood customers additional features that "freemium" users cannot access, including margin loans.

Margin lending allows Robinhood customers to buy stocks using funds borrowed from Robinhood. Margin loans allow traders to seize opportunities and invest in instruments without necessarily having the cash on hand to do so.

Initially, the Gold service was tiered, offering users larger margin borrowing limits depending on their membership level. Now, Gold costs a flat fee of \$5 per month, in addition to 5% interest based on how much users borrow.



Source: Robinhood

Robinhood Gold offers benefits beyond margin loans, including:

- Instant deposits
- Level II Market Data (real-time pricing data from Nasdaq)
- Professional research reports on around 1700 stocks prepared by Morningstar

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the event of a margin call, investors may find themselves even deeper in the red if the value of their investment falls. Margin calls occur when investments in an investor's margin account fall below a specified value known as the maintenance margin. When this happens, the account holder must deposit additional funds or sell securities to meet the maintenance margin expectations set by the brokerage.

The interest and fees from Robinhood's margin lending are a major source of revenue. The more margin a customer uses, the greater the interest. However, Robinhood's margin lending has also been a source of embarrassment for the company.

In 2019, members of a subreddit community called wallstreetbets discovered an exploit in Robinhood's margin lending system that allowed them to secure vastly inflated margin limits with comparatively small deposits. The exploit was first publicized in January 2019, when one user leveraged his margin account to \$200K with a deposit of just \$5K. Another user demonstrated how to take advantage of the exploit during a livestream in October 2019, which resulted in significant media coverage.

However, despite the well-publicized nature of these exploits, which came to be known in the investing community as the "Robinhood Infinite Money Cheat Code," Robinhood failed to take action. In November 2019, another member of the wallstreetbets subreddit managed to leverage a \$950K Tesla position and a \$425K Apple position – all with a deposit of just \$15K. The vulnerability was closed that month and accounts that were found to have used the exploit were suspended.

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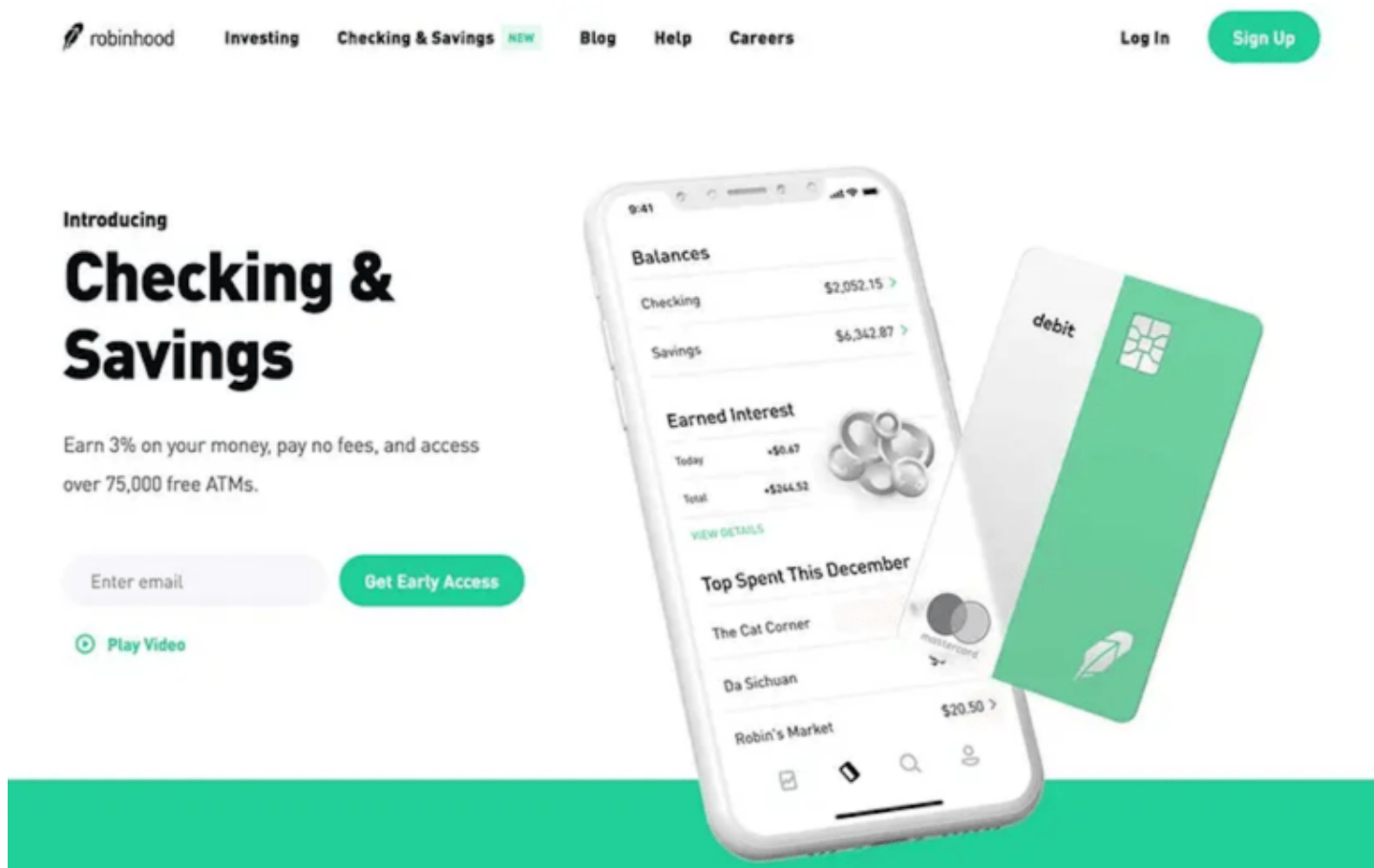
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In late 2018, Robinhood announced Checking & Savings, a more traditional banking product that the company claimed would be available in early 2019. Robinhood's proposed bank account products weren't terribly exciting, except that Checking & Savings would offer interest rates of 3%.

At the time of the announcement, average interest rates for savings accounts ranged from 0.10-0.21%, making Robinhood's forthcoming accounts among the most generous on the market. With zero fees and high interest rates, Robinhood seemed poised to transform checking accounts as it had online brokerages.



Source: Robinhood via Bankrate

But Checking & Savings never materialized.

Ordinarily, deposits made to checking and savings accounts are guaranteed by the Federal Deposit Insurance Corporation (FDIC). Robinhood claimed that deposits of up to \$250K made to its Checking & Savings accounts would instead be insured by the Securities Investor Protection Corporation (SIPC).

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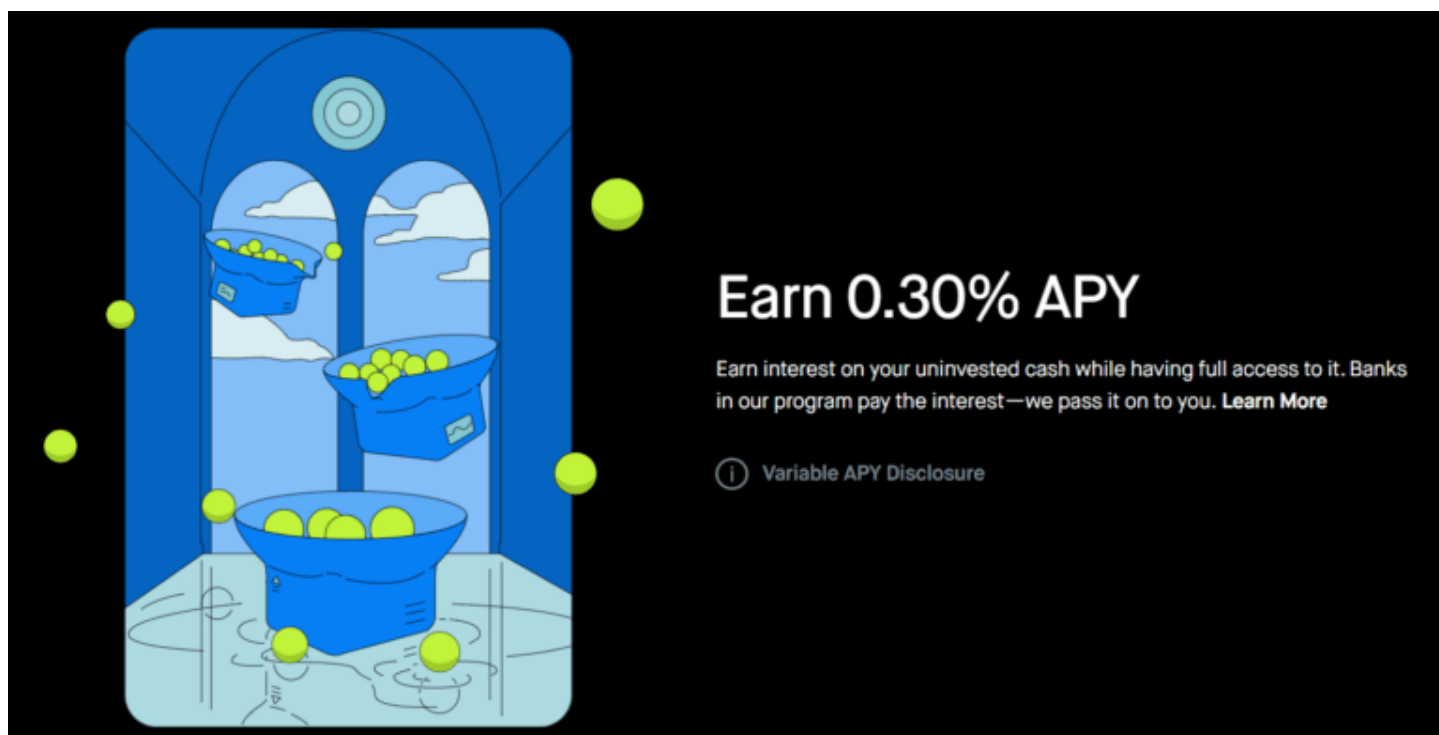
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other commercial banking products.

In October 2019, the company announced the Cash Management account and associated debit card. Similar to Checking & Savings, Cash Management accounts are completely free – with no fees or minimum balances. The card was launched in partnership with Mastercard, giving cardholders access to fee-free withdrawals from more than 75,000 ATMs.

All funds deposited to Cash Management accounts are guaranteed by the FDIC, and account holders earn 0.30% APY on the cash available in their Robinhood brokerage accounts – a percentage that aligns much more closely with the rates offered by most commercial banks. The feature was made available to all Robinhood users in 2020.



**Earn 0.30% APY**

Earn interest on your uninvested cash while having full access to it. Banks in our program pay the interest—we pass it on to you. [Learn More](#)

Variable APY Disclosure

*Source: Robinhood*

Robinhood isn't responsible for the interest payments offered to Cash Management cardholders. Instead, the company moves cardholders' funds into a network of FDIC-insured partner banks, which pay the interest on those deposits. The 6 partner banks pay fees to Robinhood, and the company also takes a small cut of the interchange fees levied on transactions made with its Cash Management debit cards.

Cash Management represents a shift in focus that other fintech companies are also making. **Betterment**, which was the first robo-advisor to emerge following the financial crisis of 2008, is

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### CAC vs. LTV

Cost-effective customer acquisition is crucial for Robinhood, given that its business model hinges on high-volume, low-margin trading. While the company has been reluctant to divulge specifics about its customer acquisition costs (CACs), it appears that the company has been able to keep these comparatively low.

In 2018, E-Trade spent \$170M to purchase more than 1M brokerage accounts (representing \$18B in assets) from Capital One Financial, placing the value of these accounts at roughly \$170. Speaking about the transaction during a conference call, an E-Trade executive remarked that this was “well below our typical customer acquisition costs for a broad set of customers that meet our target profile,” suggesting that E-Trade’s CACs are typically higher than the \$170 it paid per brokerage account.

It’s important to note that large-scale acquisitions of brokerage accounts like this are relatively rare, and that the clients represented by those accounts did not trade as frequently as a typical E-Trade client, which may be indicative of lower account value.

Some analysts estimate that Robinhood pays approximately \$25 to acquire a new user account, and that the company’s strong referral program is likely responsible for keeping CACs so low. However, while Robinhood’s CACs appear to be significantly lower than those of retail brokerages, the potential value of Robinhood accounts is also likely lower.

The average Robinhood account is worth between \$1-5K. Prior to E-Trade’s acquisition by Morgan Stanley in 2020, the company’s average brokerage account was estimated to be worth around \$69K. Morgan Stanley’s average account value is even higher, at approximately \$175K.

Robinhood may be winning battles in terms of customer acquisition, but established brokerages are clearly winning the war when it comes to account value.

But this is not necessarily a negative. For one, it allows Robinhood to pursue new users that large, legacy brokers might typically overlook. The company has also been able to successfully transform its rapid user growth into strong funding rounds, regardless of the value of the users it has attracted.

Robinhood’s primarily younger user base is promising from a growth perspective, but the lifetime value (LTV) of its accounts is likely significantly lower than those of larger, well-established retail brokerages. However, these users can be packaged into and targeted with adjacent product offerings that can drive additional revenue for Robinhood, such as debit cards.



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Arguably, the greatest potential cost center for Robinhood is its vulnerability to broader regulation of the financial sector and fintech products.

Robinhood operates in a somewhat precarious gray zone in terms of regulatory legality – which could imperil a significant part of its revenue in the event of broader regulatory overhaul. While this kind of regulatory reform is unlikely in the short term, it remains a crucial vulnerability for a company that has already had its fair share of run-ins with the SEC.

**“Robinhood’s revenue model could easily disappear. They’ve made it clear that they are comfortable living on this regulatory edge.” – Tyler Gellasch, executive director, Healthy Markets**

Another potentially significant cost center that Robinhood faces is litigation. Although the \$1.25M fine levied against it by FINRA may be relatively small for a company valued at more than \$11B, the SEC’s current investigation could result in fines of up to \$10M.

Robinhood’s legal problems are not exclusively regulatory in nature. In March 2020, a user filed a class action suit against the company following a 2-day service outage that month – which happened to occur during the largest one-day point gain in the history of the Dow Jones Index. While the suit’s merits have yet to be proven, a US district judge ordered that 13 individual actions be consolidated into a single class action lawsuit in July 2020.

Robinhood’s legal liability is unlikely to have a significantly detrimental impact on its finances in the mid- to long term, but it may cause problems for the company if it plans to go public – an idea it has been toying with since 2018.

## Pennies On The Dollar

In less than a decade, Robinhood has profoundly disrupted an industry traditionally hostile to newcomers.

While Robinhood may not be competing with established retail brokerages for the same users, it will still have to work hard to entice new users to open brokerage accounts – even if the terms of its

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Further, it will have to work hard to increase the value of its accounts to justify its recent valuation – especially in the context of the risks posed by attracting inexperienced investors new to the markets.

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